

1 Attorney Docket No. 83091

2

3 DECISION FEEDBACK EQUALIZATION PRE-PROCESSOR WITH TURBO EQUALIZER

4

5 ABSTRACT OF THE DISCLOSURE

6 The present invention provides a receiver for underwater
7 acoustic telemetry which combines a decision feedback adaptive
8 equalizer structure with a turbo-equalizer structure. The turbo-
9 equalizer structure is of significantly reduced complexity
10 because the decision feedback adaptive equalizer structure is
11 operable to pre-process a plurality of data channels to provide a
12 single symbol data output stream for application to the input of
13 the turbo-equalizer. The turbo-equalizer structure is also of
14 reduced complexity due to use of a correlator to provide channel
15 response data to the turbo-equalizer. The channel response data
16 is produced by comparing received data comprising a training
17 sequence with a locally produced training sequence.